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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,618	03/29/2001	Michael J. Romine	NOR/979	4107

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EXAMINER

KOCH, GEORGE R

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 08/13/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,618

Applicant(s)

ROMINE, MICHAEL J.

Examiner

George R. Koch III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 11-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6-23-2003 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4-7, 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Rutledge et al (US Patent 6,391,387 B1).

As to claim 1, Rutledge discloses a liquid dispenser comprising a support member (see Figures 19-22, especially item 630 and related substructures) which moves linearly (see movement axis 632 and 634), and a liquid dispensing head

operatively (item 610 and related substructures) connected to said support member and capable of pivoting movement (see axis 614 in Figure 19, around a cradle at axis G-G which is considered to be part of the dispenser) relative thereto upon contact with the substrate, said liquid dispensing head having a liquid flowpath extending therethrough terminating in an outlet for dispensing fluid onto the substrate, and a linear displacement sensor (items 668) operatively connected to said support member and said liquid dispensing head, said linear displacement sensor being capable of generating a signal that indicates a sensed displacement of said liquid dispensing head relative to said support member (see column 16, line 60 to column 19, line 36). Furthermore, Rutledge also discloses using linear movement for the liquid dispensing head as an alternative embodiment to pivoting movement (see column 3, lines 40-54).

As to claim 2, the linear displacement sensor is a linear encoder (see column 17, lines 59-61, which recites "linear encoder" and see items 674 and 672).

As to claim 4, Rutledge discloses a controller device which is a control mechanism for the apparatus, which is a robot (definition of robot : a device that automatically performs complicated often repetitive tasks or : a mechanism guided by automatic controls - from the Merriam Webster dictionary), and this robot control mechanism functions as claimed.

As to claims 5 and 6, the device of Rutledge is capable of being programmed to perform as claimed.

Claims 7, 9 and 10 are rejected on the same grounds as claims 1-6 above.

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4. Claims 3 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Rutledge (as applied to claims 2 and 7 above) with the Anorad Brochure (*Installation, Operation, and Maintenance Manual MERS50 Linear Encoder System*) cited to show that a characteristic not disclosed in the reference is inherent.

Rutledge discloses using a sensor mechanism and a tape scale as the sensor assembly. Rutledge is silent as to whether the sensor mechanism is optical, but Rutledge further discloses that the preferred sensor mechanism and tape scale is the Model MERS50-D1 sold by the Anorad Corporation.

The Anorad Brochure discloses that the preferred linear encoder (the Anorad MERS50) is a *optical* sensor and tape scale (see Anorad Linear Motor division, - Installation, Operation and Maintenance Manual MERS50- Linear Encoder System which describes the MERS50 sensor, especially page 1, first paragraph of section 1.2, which cites "The MERS50 Encoder system is a high precision, position feedback transducer for machinery or other equipment control systems. As a non-contact, optical encoder the system comprises a profiled scale strip attached to an appropriate substrate axis, and a scanning readhead."). Thus, Rutledge inherently discloses using an optical sensor mechanism, since the preferred sensor assembly is known to be an optical mechanism.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 5, 6, 9 and 10 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Rutledge as applied to claims 4 and 7 above, and further in view of Ng (US Patent 5,820,623).

As to claims 5, 6, 9 and 10, Rutledge does not explicitly disclose that the control mechanism is responsive to the signal from the linear displacement sensor to either stop movement of said support member, or to provide an alert.

Ng discloses a robotic control mechanism is responsive to the signal from the linear displacement sensor to either stop movement of said support member, or to provide an alert (see especially column 10, lines 39-50). One in the art would appreciate that such responses would prevent damage to either the apparatus or the substrate by preventing improper movements by the apparatus. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated such a robotic control mechanism with the movement stopping and alerting mechanisms in order to prevent damage to the apparatus and substrate.

Response to Arguments

8. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant argues that Rutledge does not disclose *linear* movement of the support member, and *linear* movement of the liquid dispensing head relative thereto (the support member) upon contact with the substrate. However, as pointed out in the rejection of claims 1 and 7 above, Rutledge does disclose *linear* movement of the support member, and *linear* movement of the liquid dispensing head relative thereto (the support member) upon contact with the substrate. While Figure 19 shows an embodiment wherein the support member moves linearly (axis shown by arrows 632 and 634) and the dispenser moves pivotally (arrows 614) around a cradle located at the G-G axis (Figure 19), Rutledge further discloses that the linear dispensing head can be moved in another manner, such "through the use of a *linear* actuator" (see column 3, lines 40-54).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (703) 305-3435 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-800-877-8339 and

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giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



George R. Koch III
August 8, 2003



RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700